

## CASE WITH A REINFORCED BOTTOM

### BACKGROUND OF THE INVENTION

#### 1. Field of the Invention

The invention relates to a case, more particularly  
5 to a case with a reinforced bottom.

#### 2. Description of the Related Art

Referring to Figures 1 and 2, a conventional case  
includes front and rear molded shell members 11, 12,  
a connecting unit 13 for interconnecting the shell  
10 members 11, 12, a handle 14 mounted on a top end of one  
of the shell members 11, 12, and four casters 15 mounted  
on corners of a bottom end of the molded shell members  
11, 12.

Usually, the connecting unit 13 includes a zipper  
15 or a pair of interlocking members. The connecting unit  
13 interlocks the shell members 11, 12 so that objects  
can be retained in the case. During transport of the  
case, accidental or unavoidable shocks, collisions,  
etc., will occasionally or constantly exert forces upon  
20 the connecting unit 13. Once the force of an impact is  
larger than that which can be borne by the connecting  
unit 13, or once elastic fatigue has accumulated to a  
certain extent beyond the bearable range of the  
connecting unit 13, the connecting unit 13 may rupture  
25 such that the shell members 11, 12 are broken apart,  
thereby causing the contents of the case to spill out.  
It is observed that most external impacts are

concentrated on the bottom part of the case. Accordingly, even when the shell members 11, 12 are made entirely of a rigid material, rupturing of the connecting unit 13 is unavoidable and often encountered at the bottom part of the case.

#### **SUMMARY OF THE INVENTION**

Therefore, the object of the present invention is to provide a case with a reinforced bottom so as to overcome the aforesaid drawbacks of the prior art.

Accordingly, the case of this invention comprises a bottom shell member and a main shell member. The bottom shell member is made of a rigid material, and includes a bottom wall and a peripheral wall extending upwardly and integrally from a periphery of the bottom wall. The main shell member includes a hollow case body and a panel body. The case body has a lower portion that is connected fixedly to the peripheral wall such that the case body cooperates with the bottom shell member to form a receiving space of the case. The case body is formed with an access opening that permits access into the receiving space. The panel body is connected movably to the case body so as to permit closing and opening of the access opening.

#### **BRIEF DESCRIPTION OF THE DRAWINGS**

Other features and advantages of the present invention will become apparent in the following detailed description of the preferred embodiments with reference

to the accompanying drawings, of which:

Figure 1 is a perspective view of a conventional case in a closed state;

Figure 2 is a perspective view of the conventional case in an opened state;

Figure 3 is a perspective view of the first preferred embodiment of a case according to the present invention, illustrating a panel body of a main shell member thereof in an opened state;

Figure 4 is a front view of the first preferred embodiment;

Figure 5 is a side view of the first preferred embodiment;

Figure 6 is a fragmentary bottom perspective view of the first preferred embodiment; and

Figure 7 is a fragmentary bottom perspective view to illustrate a bottom shell member of the second preferred embodiment of a case according to the present invention.

## **20 DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENTS**

Referring to Figures 3 to 6, the first preferred embodiment of a case according to the present invention is shown to comprise a bottom shell member 2, a main shell member 3, a connecting unit 33, a first pull handle 41, a second pull handle 42, a pair of casters 5, an auxiliary support 6, a retractable handle assembly 7, and a set of foot posts 8.

The bottom shell member 2 is made of a rigid material, and includes a generally rectangular bottom wall 21 and a peripheral wall 22 extending upwardly and integrally from a periphery of the bottom wall 21. In this embodiment, the bottom shell member 2 is molded integrally from a rigid plastic material. In practice, the material for the bottom shell member 2 should not be limited to plastic, and may instead be a metal material, such as aluminum.

The main shell member 3 includes a generally rectangular hollow case body 31 and a panel body 32. The case body 31 has a lower portion that is connected fixedly to the peripheral wall 22, such as with the use of stitch seams (not shown), so that the case body 31 cooperates with the bottom shell member 2 to form a receiving space 30 of the case. The case body 31 has a front side formed with an access opening 311 that permits access into the receiving space 30. The panel body 32 is connected movably to the case body 31 so as to permit closing and opening of the access opening 311. In this embodiment, the connecting unit 33 is in the form of a conventional zipper that interconnects the case body 31 and the panel body 32.

The first pull handle 41 is mounted fixedly on a top side of the case body 31 opposite to the bottom wall 21 of the bottom shell member 2. The second pull handle 42 is mounted fixedly on a right lateral side of the case body 31. In this embodiment, there are four foot

posts 8 (see Figure 5) that are mounted fixedly and respectively on four corner portions of a left lateral side of the case body 31. Therefore, when the second pull handle 42 is used to carry the case, the case can be subsequently placed to stand on a ground surface with the use of the foot posts 8. As such, regardless of whether the case is in an upright or transverse orientation, there is always a pull handle 41 or 42 conveniently available for use when carrying the case.

The retractable handle assembly 7 is conventional in construction, is mounted on the case body 31 inside the receiving space 30, and extends outwardly of the top side of the case body 31. The retractable handle assembly 7 is operated when it is desired to pull the case.

As shown in Figures 5 and 6, each of the casters 5 includes a roller seat 51 mounted fixedly on a respective rear corner of the bottom wall 21 of the bottom shell member 2, and a roller 52 mounted rotatably on the roller seat 51 and disposed to contact the ground surface. The auxiliary support 6 is mounted on a front middle portion of the bottom wall 21 of the bottom shell member 2, and has a height corresponding to those of the casters 5. The auxiliary support 6 can thus cooperate with the casters 5 to permit the case to stand stably on the ground surface. Preferably, the auxiliary support 6 is generally U-shaped, and has opposite ends connected to

the bottom wall 21 of the bottom shell member 2 so as to form a finger hole 61. Accordingly, the user can hold the first pull handle 41 and the auxiliary support 6 when carrying the case while the latter is oriented horizontally.

In sum, since the bottom shell member 2 of the case of this invention is made of a rigid material, and since the connecting unit 33 is provided solely on the main shell member 3, which is disposed above the bottom shell member 2, accidental or unavoidable impacts that are concentrated on the bottom shell member 2 during transport of the case will not result in rupturing of the connecting unit 33.

Referring to Figure 7, the second preferred embodiment of this invention differs from the previous embodiment in the number and type of the casters 50, and in the use of an auxiliary handle 60 instead of the auxiliary support 6. In this embodiment, the casters 50 are mounted respectively on four corners of the bottom wall 21 of the bottom shell member 2. Each of the casters 50 includes a roller seat 501 mounted fixedly on the bottom wall 21, and a roller unit 502 mounted rotatably on the roller seat 501 and capable of 360-degree rotation about a vertical axis. The auxiliary handle 60 is mounted on an intermediate part of the bottom wall 21 of the bottom shell member 2, is generally U-shaped, and has opposite ends connected to the bottom wall 21 of the

bottom shell member 2, and a height less than those of the casters 50.

While the present invention has been described in connection with what is considered the most practical and preferred embodiments, it is understood that this  
5 invention is not limited to the disclosed embodiments but is intended to cover various arrangements included within the spirit and scope of the broadest interpretation so as to encompass all such modifications  
10 and equivalent arrangements.